

REMARKS

This Response, submitted in reply to the Office Action dated January 5, 2005, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-18 remain pending in the application. Claims 1-8 and 15-16 have been allowed. Claims 9-14 and 17-18 have been rejected under 35 U.S.C. § 103 in view of Mueller (U.S.P. 6,373,074) and further in view of Endriz (U.S.P. 5,594,752) and Ishiwata (U.S.P. 6,157,756). Applicant submits the following arguments in traversal of the prior art rejections.

Applicant's invention relates to an image reading apparatus whereby stimulating light from one or multiple light sources is output to an image storage medium in a uniform manner. In an exemplary embodiment, a laser diode outputs light which is converged by a cylindrical lens with respect to one direction, in particular, the lens converges the light only in a plane parallel to a junction plane of the laser diode.

Turning to the cited art, Mueller relates generally to an image read out apparatus. Referring to Fig. 4, Mueller discloses laser sources 20 - 29, whose beam outputs S1 - S9 become extended in a direction of the alignment of the laser sources and simultaneously converged in the direction perpendicular thereto.

Endriz relates to a linear light source with optical beam shaping. Referring to Fig. 2, lens 17 reduces transverse divergence, substantially collimating light in a direction perpendicular to the plane of the laser active region, but does not affect lateral divergence in the direction of the arrangement of the lenslets 20 and lens array 18. The lens 17 and lens 18 in combination provide transverse and lateral collimation. Col. 5, lines 43-53.

Ishiwata relates to beam shaping by using an array of alternating optical fibers of two or more different diameters to expand a laser beam into a wide continuous arc.

The Examiner contends that the combination of Mueller, Endriz and Ishiwata teaches or suggests each feature of independent claim 9. Applicant submits that the rejection is not supported for at least the following reasons.

Assuming arguendo that Mueller and/or Endriz teaches a direction of the junction plane, the references do not further teach convergence of a light beam only in a direction parallel to the direction of the junction plane. Fig. 4 of Mueller specifically shows that a lens converges vertically while the arrangement of the diodes is horizontal. According to the Examiner's construction of the junction plane in the references, the convergence feature in only a parallel direction as described by claim 9 is not taught.

Because claim 12 includes features similar, though not necessarily coextensive, to that of claim 9, claim 12 is patentable for the reasons set forth above.

With further regard to claims 17-18, the Examiner concedes that Mueller fails to teach that the reproduction device includes a cylindrical lens having a single continuous cylindrical surface. The Examiner cites Endriz and Ishiwata to make up for this deficiency. In this connection, the Examiner cites col. 5, lines 25-53 of Endriz for teaching lens integration into a single lens. However, to the extent the lens of Endriz is integrated, this relates to integration of collimating lenses 17-18 and not converging lenses. The Examiner also cites the cols. 1, 6-8 and 14 of Ishiwata for generally teaching a beam shaper to expand a beam into an extended line. Ishiwata specifically notes that the use of lenses and prisms and combinations thereof provide limited illumination from a light source. Accordingly, Ishiwata teaches away from such optical

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devices in favor of fibers of alternating diameters which provide desired focusing and expansion functions. Because Ishiwata teaches a series of fibers, and not a single lens having a single continuous surface, Applicant submits that Ishiwata does nothing to cure the deficiencies of the primary Mueller reference. Endriz similarly does not cure the deficiencies of Mueller.

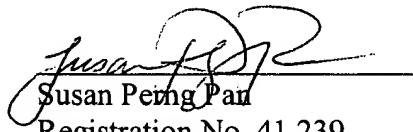
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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